***** QUERY RESULTS ***** (FORMULA 3a/4a)

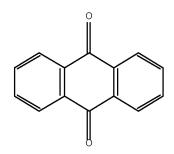
=> d his 114

(FILE 'REGISTRY' ENTERED AT 08:16:27 ON 11 SEP 2009)
SAVE TEMP L13 NGU057RECOM2/A

FILE 'HCAPLUS' ENTERED AT 08:24:13 ON 11 SEP 2009 L14

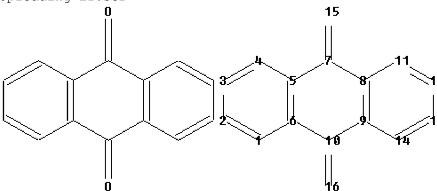
=> d que 114

L3 STR



Structure attributes must be viewed using STN Express query preparation:

Uploading L1.str



chain nodes :

15 16

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14

chain bonds : 7-15 10-16

ring bonds :

 $1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 5-7 \quad 6-10 \quad 7-8 \quad 8-9 \quad 8-11 \quad 9-10 \quad 9-14 \quad 11-12 \quad 12-13$

13-14

exact/norm bonds :

7-15 10-16

exact bonds :

5-7 6-10 7-8 9-10

normalized bonds :

 $1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 8-9 \quad 8-11 \quad 9-14 \quad 11-12 \quad 12-13 \quad 13-14$

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS

L5 72890 SEA FILE=REGISTRY SSS FUL L3 L7 STR

Structure attributes must be viewed using STN Express query preparation:

Uploading L3.str

```
chain nodes :
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
7-15 10-16 11-17 14-22 17-18 18-19 18-20 22-23 23-24 23-25
ring bonds :
1-2^{-1} 1-6 1-10 2-3 3-4 4-5 5-6 6-7 7-8 8-9 8-11 9-10 9-14 11-12 12-13
13 - 14
exact/norm bonds :
7-15 10-16 11-17 14-22 17-18 18-19 22-23 23-24
exact bonds :
1-10 6-7 7-8 9-10 18-20 23-25
normalized bonds :
1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 8-9 \quad 8-11 \quad 9-14 \quad 11-12 \quad 12-13 \quad 13-14
isolated ring systems :
containing 1 :
Match level:
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:CLASS
19:CLASS 20:CLASS 22:CLASS
23:CLASS 24:CLASS 25:CLASS
```

L8 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *
Structure attributes must be viewed using STN Express query preparation:
Uploading L4.str

```
chain nodes :
15 16 17 33 34
ring nodes :
28 29 30 31 32 35 36 37 38 39 40 41 42
chain bonds :
7-15 10-16 11-17 17-20 25-33 28-34
ring bonds :
1-2 \quad 1-6 \quad 1-10 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 6-7 \quad 7-8 \quad 8-9 \quad 8-11 \quad 9-10 \quad 9-14 \quad 11-12 \quad 12-13
13 - 14 \quad 13 - 35 \quad 14 - 38 \quad 19 - 20 \quad 19 - 24 \quad 20 - 21 \quad 21 - 22 \quad 21 - 25 \quad 22 - 23 \quad 22 - 28 \quad 23 - 24 \quad 25 - 26
26-27 26-29
27 - 28 \quad 27 - 32 \quad 29 - 30 \quad 30 - 31 \quad 31 - 32 \quad 35 - 36 \quad 36 - 37 \quad 36 - 39 \quad 37 - 38 \quad 37 - 42 \quad 39 - 40 \quad 40 - 41 \quad 37 - 38 \quad 37 - 42 \quad 39 - 40 \quad 40 - 41 \quad 39 - 40 \quad 40 - 41 \quad 40 -
41 - 42
exact/norm bonds :
1 - 10 \quad 6 - 7 \quad 7 - 8 \quad 7 - 15 \quad 9 - 10 \quad 10 - 16 \quad 11 - 17 \quad 13 - 35 \quad 14 - 38 \quad 17 - 20 \quad 25 - 33 \quad 28 - 34 \quad 35 - 36
37-38
exact bonds :
21-25 22-28 25-26 27-28
normalized bonds :
1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 8-9 \quad 8-11 \quad 9-14 \quad 11-12 \quad 12-13 \quad 13-14 \quad 19-20 \quad 19-24
20-21 21-22 22-23 23-24 26-27 26-29 27-32 29-30 30-31 31-32 36-37 36-39
37-42 39-40
40-41 41-42
isolated ring systems :
containing 1 : 19 :
```

Match level:

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 19:Atom 20:Atom

21:CLASS 22:Atom

23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom 31:Atom

32:Atom 33:CLASS

34:CLASS 35:Atom 36:Atom 37:Atom 38:Atom 39:Atom 40:Atom 41:Atom 42:Atom

1 SEA FILE=REGISTRY SUB=L5 SSS FUL L7 AND L8 L10

L14 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L10

=> d l14 ibib abs hitstr hitind

L14 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 1967:412525 HCAPLUS Full-text

DOCUMENT NUMBER: 67:12525 ORIGINAL REFERENCE NO.: 67:2427a,2430a

Vat dyes TITLE:

INVENTOR(S): Hohmann, Walter

PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.

SOURCE: Ger., 4 pp.

CODEN: GWXXAW

DOCUMENT TYPE: Patent German LANGUAGE:

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1232296		19670112	DE 1964-F42969	19640523
FR 1434038			FR	
GB 1087568			GB	

- For diagram(s), see printed CA Issue. GΙ
- AΒ Vat dyes are prepared by carbazolizing anthrimides, obtained by treating 1chloro-4,5,8-tribenzamidoanthraquinone (I) with aminoanthraquinones. Thus, a mixture of I 20, 1-aminoanthraquinone (II) 9, Na2CO3 3.3, Cu mixture 2, and naphthalene 200 parts was boiled for 5 hrs., cooled to 130°, 200 parts PhCl added, the precipitate filtered at 80°, washed with PhCl, and the solvent and salts removed by steam-distillation to give 4,5,8-tribenzoyl-1,1'-dianthrimide (III), green in concentrated H2SO4, gray-blue flocks in H2O. III (10 parts) was added to a mixture of 40 parts AlCl3 and 90 parts pyridine at 110° , heated for 1 hr. at 140° with partial distillation of pyridine, the melt taken up in dilute NaOH, heated at 80° with addition of NaCl, filtered and dried to give 10 parts IV, which dyed cotton gray from a red-brown vat. Similarly, other dyes were prepared from I (amine component, vat color, and shade given): 4-BzNH derivative of II, brown, black-brown; 5-BzNH derivative of II, -, graybrown; 4,4'-diamino-1,1'-dianthrimide, -, greenish gray; 4-amino-1,1'dianthrimide, khaki, blue-gray; 2-amino-3,4-phthaloylacridone, red-brown reddish gray; 5-aminoanthrapyrimidine, brown, black-brown. I condensed with 4-amino-1,1'-dianthrimidecarbazole gave the corresponding anthrimidemonocarbazole, yellow-brown, in H2SO4, olive green on cotton from a red-brown vat.
- 15956-72-6P ΤT

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of)

15956-72-6 HCAPLUS RN

CN Benzamide, N,N',N''-[8-[(5,14-dihydro-5,8,14-trioxonaphth[2,3-c]acridan-6-yl)amino]-9,10-dihydro-9,10-dioxo-1,4,5-anthracenetriyl]tris- (8CI) (CA INDEX NAME)

IC C09B

CC 40 (Dyes, Fluorescent Brightening Agents, and Photosensitizers)

IT 6245-09-6DP, 7H-Benzo[e]perimidin-7-one, derivs. as dyes 15956-69-1P

15956-72-6P 15956-73-7P 16058-63-2P 16058-94-9P

16058-95-0P 16555-04-7P 16555-05-8P

 ${\tt RL:} \ {\tt IMF} \ ({\tt Industrial} \ {\tt manufacture}) \ ; \ {\tt PREP} \ ({\tt Preparation})$

(preparation of)

***** QUERY RESULTS ***** (FORMULA 2a/3a)

=> d his 115

(FILE 'HCAPLUS' ENTERED AT 08:24:13 ON 11 SEP 2009)

L15 9 S L13

SAVE TEMP L14 NGU057HCAP1/A SAVE TEMP L15 NGU057HCAP2/A

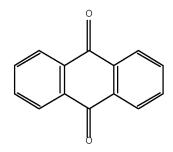
FILE 'STNGUIDE' ENTERED AT 08:26:41 ON 11 SEP 2009

FILE 'HCAPLUS' ENTERED AT 08:27:24 ON 11 SEP 2009

FILE 'STNGUIDE' ENTERED AT 08:27:27 ON 11 SEP 2009

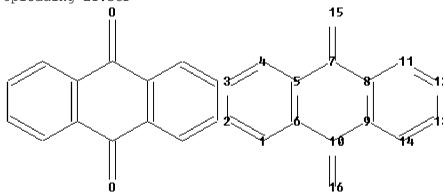
=> d que 115

L3 STR



Structure attributes must be viewed using STN Express query preparation:

Uploading L1.str



chain nodes :

15 16

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14

chain bonds : 7-15 10-16

ring bonds :

7

exact/norm bonds:
7-15 10-16
exact bonds:
5-7 6-10 7-8 9-10
normalized bonds:

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-11 9-14 11-12 12-13 13-14

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS

L5 72890 SEA FILE=REGISTRY SSS FUL L3 L7 STR

Structure attributes must be viewed using STN Express query preparation:

Uploading L2.str

```
chain nodes :
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
2-17 \quad 7-15 \quad 10-16 \quad 11-21 \quad 17-18 \quad 18-19 \quad 18-20 \quad 21-22 \quad 22-23 \quad 22-24
ring bonds :
1-2 \quad 1-6 \quad 1-10 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 6-7 \quad 7-8 \quad 8-9 \quad 8-11 \quad 9-10 \quad 9-14 \quad 11-12 \quad 12-13
13 - 14
exact/norm bonds :
2-17 7-15 10-16 11-21 17-18 18-19 21-22 22-23
exact bonds :
1-10 6-7 7-8 9-10 18-20 22-24
normalized bonds :
1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 8-9 \quad 8-11 \quad 9-14 \quad 11-12 \quad 12-13 \quad 13-14
isolated ring systems :
containing 1 :
```

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS 24:CLASS

L11 STR

Structure attributes must be viewed using STN Express query preparation:

Uploading L3.str

```
chain nodes :
15  16  17  18  19  20  22  23  24  25
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14
chain bonds :
7-15  10-16  11-17  14-22  17-18  18-19  18-20  22-23  23-24  23-25
ring bonds :
1-2  1-6  1-10  2-3  3-4  4-5  5-6  6-7  7-8  8-9  8-11  9-10  9-14  11-12  12-13
13-14
exact/norm bonds :
7-15  10-16  11-17  14-22  17-18  18-19  22-23  23-24
exact bonds :
1-10  6-7  7-8  9-10  18-20  23-25
```

normalized bonds :

 $1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 8-9 \quad 8-11 \quad 9-14 \quad 11-12 \quad 12-13 \quad 13-14$

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom

11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:CLASS

19:CLASS 20:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS

L13 7 SEA FILE=REGISTRY SUB=L5 SSS FUL L7 AND L11

L15 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L13

=> d l15 1-9 ibib abs hitstr hitind

L15 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2005:1109428 HCAPLUS Full-text

DOCUMENT NUMBER: 145:73230

TITLE: A second-generation liquid crystal phase-shifting

point-diffraction interferometer employing structured

substrates

AUTHOR(S): Marshall, Kenneth L.; Adlesberger, Kathleen; Kolodzie,

Benjamin; Myhre, Graham; Griffin, DeVon W.

CORPORATE SOURCE: Laboratory for Laser Energetics, University of

Rochester, Rochester, NY, 14623, USA

SOURCE: Proceedings of SPIE-The International Society for

Optical Engineering (2005), 5880 (Optical Diagnostics),

58800D/1-58800D/12

CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical Engineering

DOCUMENT TYPE: Journal LANGUAGE: English

By design, point-diffraction interferometers are much less sensitive to AΒ environmental disturbances than dual-path interferometers, but, until very recently, have not been capable of phase shifting. The liquid crystal pointdiffraction interferometer (LCPDI) utilizes a dye-doped, liquid crystal (LC) electro-optical device that functions as both the point-diffraction source and the phase-shifting element, yielding a phase-shifting diagnostic device that is significantly more compact and robust while using fewer optical elements than conventional dual-path interferometers. These attributes make the LCPDI of special interest for diagnostic applications in the scientific, com., military, and industrial sectors, where vibration insensitivity, power requirements, size, weight, and cost are critical issues. Until very recently, LCPDI devices have used a plastic microsphere embedded in the LC fluid layer as the point-diffraction source. The process for fabricating microsphere-based LCPDI devices is low-yield, labor-intensive, and very "hands-on"; great care and skill are required to produce devices with adequate interference fringe contrast for diagnostic measurements. With the goal of evolving the LCPDI beyond the level of a laboratory prototype in mind, we have developed "second-generation" LCPDI devices in which the reference-diffracting elements are an integral part of the substrates by depositing a suitable optical material (vapor-deposited thin films or photoresist) directly onto the substrate surface. These "structured" substrates eliminate many of the assembly difficulties and performance limitations of current LCPDI devices as

***** SEARCH HISTORY *****

=> d his nof

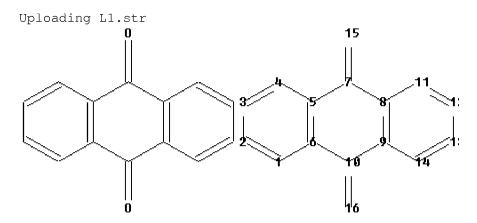
L3

(FILE 'HOME' ENTERED AT 08:15:34 ON 11 SEP 2009)

FILE 'REGISTRY' ENTERED AT 08:16:27 ON 11 SEP 2009
L2 26 SEA ABB=ON PLU=ON (10114-51-9/BI OR 2987-68-0/BI OR 4058-46-2

/BI OR 75311-89-6/BI OR 75312-67-3/BI OR 75312-68-4/BI OR 75312-69-5/BI OR 75332-93-3/BI OR 75332-94-4/BI OR 81-73-2/BI OR 82-18-8/BI OR 851719-47-6/BI OR 851719-48-7/BI OR 851719-49-8/BI OR 851719-50-1/BI OR 851719-51-2/BI OR 851719-52-3/BI OR 851719-53-4/BI OR 851719-54-5/BI OR 851719-55-6/BI OR 851719-56-7/BI OR 851719-57-8/BI OR 851719-58-9/BI OR 851719-59-0/BI OR 851719-60-3/BI OR 851773-71-2/BI)

STRUCTURE UPLOADED



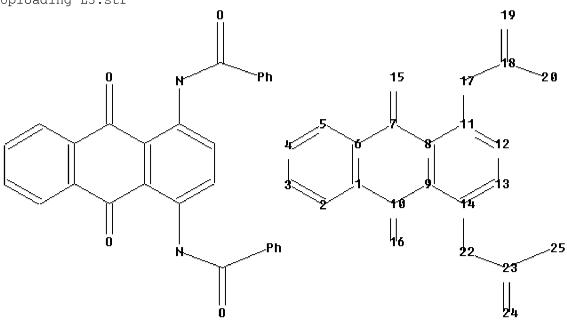
chain nodes : 15 16 ring nodes : 1 2 3 4 5 6 7 8 9 10 11 12 13 14 chain bonds : 7-15 10-16 ring bonds : $1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 5-7 \quad 6-10 \quad 7-8 \quad 8-9 \quad 8-11 \quad 9-10 \quad 9-14 \quad 11-12 \quad 12-13$ 13-14 exact/norm bonds : 7-15 10-16 exact bonds : 5-7 6-10 7-8 9-10 normalized bonds : $1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 8-9 \quad 8-11 \quad 9-14 \quad 11-12 \quad 12-13 \quad 13-14$ isolated ring systems : containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS

```
L4 50 SEA SSS SAM L3
L5 72890 SEA SSS FUL L3
SAVE TEMP L5 NGU057REGL1/A
L6 24 SEA ABB=ON PLU=ON L5 AND L2
L7 STRUCTURE UPLOADED
D
```

Uploading L3.str



```
chain nodes :
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
7-15 10-16 11-17 14-22 17-18 18-19 18-20 22-23 23-24 23-25
ring bonds :
1-2 \quad 1-6 \quad 1-10 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 6-7 \quad 7-8 \quad 8-9 \quad 8-11 \quad 9-10 \quad 9-14 \quad 11-12 \quad 12-13
13 - 14
exact/norm bonds :
7-15 10-16 11-17 14-22 17-18 18-19 22-23 23-24
exact bonds :
1-10 6-7 7-8 9-10 18-20 23-25
normalized bonds :
1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 8-9 \quad 8-11 \quad 9-14 \quad 11-12 \quad 12-13 \quad 13-14
isolated ring systems :
containing 1 :
```

Match level:

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS

L8 STRUCTURE UPLOADED

Uploading L4.str

chain nodes : 15 16 17 33 34 ring nodes : $1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10 \quad 11 \quad 12 \quad 13 \quad 14 \quad 19 \quad 20 \quad 21 \quad 22 \quad 23 \quad 24 \quad 25 \quad 26 \quad 27$ 28 29 30 31 32 35 36 37 38 39 40 41 42 chain bonds : 7-15 10-16 11-17 17-20 25-33 28-34 ring bonds : $1-2 \quad 1-6 \quad 1-10 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 6-7 \quad 7-8 \quad 8-9 \quad 8-11 \quad 9-10 \quad 9-14 \quad 11-12 \quad 12-13$ $13 - 14 \quad 13 - 35 \quad 14 - 38 \quad 19 - 20 \quad 19 - 24 \quad 20 - 21 \quad 21 - 22 \quad 21 - 25 \quad 22 - 23 \quad 22 - 28 \quad 23 - 24 \quad 25 - 26$ 26-27 26-29 27-28 27-32 29-30 30-31 31-32 35-36 36-37 36-39 37-38 37-42 39-40 40-41 41 - 42exact/norm bonds : $1 - 10 \quad 6 - 7 \quad 7 - 8 \quad 7 - 15 \quad 9 - 10 \quad 10 - 16 \quad 11 - 17 \quad 13 - 35 \quad 14 - 38 \quad 17 - 20 \quad 25 - 33 \quad 28 - 34 \quad 35 - 36$ 37-38 exact bonds : 21-25 22-28 25-26 27-28 normalized bonds : $1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 8-9 \quad 8-11 \quad 9-14 \quad 11-12 \quad 12-13 \quad 13-14 \quad 19-20 \quad 19-24$

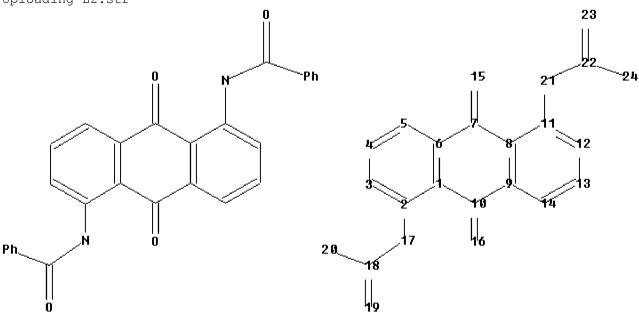
20-21 21-22 22-23 23-24 26-27 26-29 27-32 29-30 30-31 31-32 36-37 36-39 37-42 39-40 $40-41 \ 41-42$ isolated ring systems : containing 1 : 19 :

Match level:

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 19:Atom 20:Atom 21:CLASS 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom 31:Atom 32:Atom 33:CLASS 35:Atom 36:Atom 37:Atom 38:Atom 39:Atom 40:Atom 41:Atom 42:Atom

L9 0 SEA SUB=L5 SSS SAM L7 AND L8
L10 1 SEA SUB=L5 SSS FUL L7 AND L8
D SCA
SAVE TEMP L10 NGU057RECOM1/A
STRUCTURE UPLOADED

Uploading L2.str



chain nodes :
15 16 17 18 19 20 21 22 23 24
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
2-17 7-15 10-16 11-21 17-18 18-19 18-20 21-22 22-23 22-24
ring bonds :
1-2 1-6 1-10 2-3 3-4 4-5 5-6 6-7 7-8 8-9 8-11 9-10 9-14 11-12 12-13
13-14
exact/norm bonds :
2-17 7-15 10-16 11-21 17-18 18-19 21-22 22-23

exact bonds :

1-10 6-7 7-8 9-10 18-20 22-24

normalized bonds :

 $1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 8-9 \quad 8-11 \quad 9-14 \quad 11-12 \quad 12-13 \quad 13-14$

isolated ring systems :

containing 1 :

Match level :

 $1: A \texttt{tom} \quad 2: A \texttt{tom} \quad 3: A \texttt{tom} \quad 4: A \texttt{tom} \quad 5: A \texttt{tom} \quad 6: A \texttt{tom} \quad 7: A \texttt{tom} \quad 8: A \texttt{tom} \quad 9: A \texttt{tom} \quad 10: A \texttt{tom}$

11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:CLASS

19:CLASS 20:CLASS 21:CLASS

22:CLASS 23:CLASS 24:CLASS

L12 1 SEA SUB=L5 SSS SAM L7 AND L11

D SCA

L13 7 SEA SUB=L5 SSS FUL L7 AND L11

SAVE TEMP L13 NGU057RECOM2/A

FILE 'HCAPLUS' ENTERED AT 08:24:13 ON 11 SEP 2009

L14 1 SEA ABB=ON PLU=ON L10

D SCA TI

D AU

L15 9 SEA ABB=ON PLU=ON L13

SAVE TEMP L14 NGU057HCAP1/A

SAVE TEMP L15 NGU057HCAP2/A

FILE 'STNGUIDE' ENTERED AT 08:26:41 ON 11 SEP 2009

D QUE L14

FILE 'HCAPLUS' ENTERED AT 08:27:24 ON 11 SEP 2009

D L14 IBIB ABS HITSTR HITIND

FILE 'STNGUIDE' ENTERED AT 08:27:27 ON 11 SEP 2009

D QUE L5

D QUE L15

FILE 'HCAPLUS' ENTERED AT 08:27:55 ON 11 SEP 2009

D L15 1-9 IBIB ABS HITSTR HITIND

FILE 'STNGUIDE' ENTERED AT 08:27:58 ON 11 SEP 2009